HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

HDMI MADE EASY

A mini guide from

keene
making AV happen

New Products and Special Offers

HDMI to Component Convertor

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ONLY
£69.00

Gigavideo 821 Wireless HDMI Sender

See inside on page 13 for additional receivers and packs

ONLY
£265.00

Contents

Information & Advice!
Look inside to find the answers to common HDMI questions

More HDMI offers inside

Network Cabling	from **£1.99**	**HDMI Format Convertors**	from **£69.00**
HDMI Matrix Switchers	from **£84.99**	**Adaptors & Wall Plates**	from **£29.99**

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FAQ's on HDMI

You call us, we listen, we answer (or try!)
On the wonderful subject of HDMI, here's the things we get asked about the most:

I want to split my HDMI signal

This requires a Distribution Amplifier - something that takes one signal in and gives you multiple identical signals out.
You would use one of these where you'd like one source to be sent to multiple displays.

People also sometimes call these "splitters" as you are in affect splitting one signal into many. Splitters are more usually used to refer to analogue audio and video devices as these can be "split" passively in a crude fashion without any electronics. A distribution amplifier contains circuitry to buffer the signal and ensure that each output is the same as the input. Even if you wanted to you cannot passively split an HDMI signal (because it is digital) so the correct terminology is a Distribution Amplifier.

I want to go from a scart to HDMI

That's no problem, but because you are converting an analogue signal (Scart) to a digital one (HDMI) you need an electronic box of tricks in the middle. Although we get asked many times, it is sadly impossible to simply chop an HDMI plug off and solder on a scart cable in its place. (OK, it's not impossible but it definitely wouldn't work!). There are plenty of convertors that will perform this task and also upscale the analogue video signal as well.

I want to go from an HDMI to a scart

This is possible but trickier depending upon what the HDMI source is. HDMI from a commercial source (such as a DVD player or set top box) will almost certainly contain HDCP copy protection (see info panel) and cannot be converted back to analogue. If the source is non HDCP (eg camcorder) then there are several boxes to perform this task.

Can I send 3D HDMI to other rooms in the house?

3D from a Blu-ray player will only work via a correctly specified HDMI cable or an HDBaseT extender. Lower resolution interlaced 3D from sources such as Sky will work with almost all of the other extender systems.

I haven't got enough HDMI sockets on my TV

In this instance you need a switchbox - something that will take a number of HDMI devices in and let you choose which one is routed to the output. Switchboxes can be automatic (switch to last device switched on) or manual (front pushbutton and/or IR control).

I want to send an HDMI signal to another room in the house

There are several ways to accomplish this. You can choose between:

a) A very long HDMI cable

advantages: Preservation of all content. Some of the other methods will not send multichannel audio for example.

disadvantages: long HDMI cables are usually thicker and so unwieldy and difficult to route through wall space and trunking.
Max length usually 20m. Notoriously unpredictable results depending upon equipment used. IR feedback will require other equipment.

b) HDMI over CAT5/6 (baluns)

advantages: CAT5 cable is cheap by comparison and flexible so easy to run through wall spaces and trunking.
Max length can be up to 60m.

disadvantages: some models do not provide IR feedback. some models require two separate runs of CAT5.

c) HDMI over HDBaseT Uses different technology to other HDMI over CAT5 extenders to give amazing results.

advantages: One single CAT5E cable send crystal clear 3D HDMI at 1080P with 7.1channel audio and also provides IR control, RS232 and extend your 100Mbps LAN.

disadvantages: relatively expensive

d) HDMI over IP network

advantages: If the IP network is already installed then no extra cabling is required. Can also be used with homeplug ethernet over mains adaptors. IR feedback is built into the unit. Plug and play with no configuration. Other network receivers can easily be added in different rooms.

disadvantages: The audio output is stereo not multichannel. The IP router needs to be compatible with multicast. The HDMI signal is dynamically compressed (although in practical terms it's extremely hard to notice).

e) Wireless HDMI video sender

advantages: neat and tidy - no cables to worry about. IR feedback built in. Easy to move from room to room. The HDMI signal is uncompressed.

disadvantages: relatively short range, most suited to within room or adjacent room use.

Email your order to us at **sales@keene.co.uk**

Top Tips to better HDMI

Common Problems and Solutions:

Random white dots on screen

These dots (aka "sparklies") are usually caused by using an incorrectly specified or poorly screened cable, or by signal losses caused by multiple in-line connections such as cable joiners and wall plates. It is usually most apparent when the equipment is operating at its maximum bandwidth (1080p) as this is more demanding of the cable than say 1080i or 720p. To cure, either reduce the resolution, use a shorter, better specified cable (if possible) and/or use a powered HDMI in-line signal repeater to increase the signal gain.

No Picture at all

When the equipment is first switched on there is a digital "handshake" whereby the source and display communicate with each other. If this handshake is not successful then the display will not show anything from that source. If this happens then usually switching the source off and then back on whilst leaving the display on will force a new handshake and solve the problem. If that fails try switching off both devices, and if that still fails then try a different cable and/or selectively remove any switchboxes or distribution amplifiers that might be in-line.

Picture appears for a while then randomly disappears

Like the sparklies above this is usually caused by incorrectly specified or poorly screened cable. An HDMI in-line repeater (not passive joiner) can also be very useful in solving this problem.

General notes:

It is worth thinking of HDMI as an RF signal, (HDMI is in fact specified up to a 340MHz (UHF) level signal) and so most things that apply to RF cable routing also make sense with HDMI. These include avoiding sharp bends and tight narrow loops in the cable and not routing it alongside cables likely to radiate RF interference such as mains wiring etc. Tight bends can crush the cable insulation internally, causing a change in cable impedance, RF signal reflections and all manner of horrors! HDMI does have error correction built in but there's only so much error it can cope with before you'll notice drop-out and sparklies. Right angled HDMI adaptors are a good solution to the close fitting display as they will perform much better than a tightly bent cable.

Continuing with the RF theme then you can think of everything in line between your source and your display as having an "insertion loss", basically something that reduces the strength or quality of the signal.

Devices that introduce an insertion loss include:

HDMI wallplates, HDMI cable couplers, HDMI switchboxes (cheap ones)

For example, if you connect a DVD player to a display with a 1m cable then the only signal losses along the way can come from within the cable itself. Now imagine a DVD player connected via 1m cable to an HDMI wall plate. The wallplate is internally connected by a 1m cable to a wallpate in an adjacent room, and that is in turn connected via a 1m cable to a display. Now there is only 3m of cable in-line, but because of the insertion loss of the extra connectors the signal is more akin to one that has travelled down a 20m cable. That's not to say that wallplates are a bad idea, they can be very useful for creating neat installations, it's just that you need to bear these losses in mind when planning your installation. The losses involved are usually within an acceptable range of tolerance for most equipment but sometimes you may need to add an in-line signal booster to ensure performance at the highest resolutions.

Why do signal boosters say "power supply not normally required"?

The HDMI specification states that all HDMI sources must provide 5v at least 55mA for the handshaking process. 55mA isn't really enough power to be useful for an in-line device such as a signal booster, however in practice most mains powered devices usually provide more current than this and so an external power source is not normally needed. The signal boosters do have a socket for external power should it be required, but unless the source is something like a camcorder or a laptop then it is not normally required.

Surely all cables are the same – if it's digital then if you'll either get a picture or you won't?

This isn't unfortunately correct, as the demands on the cable are different at different resolutions and you may well find you get a picture at say 720p but not at 1080p. Also, HDMI uses built in error correction and it follows that a pure error free signal from a quality cable is always going to be more reliable in the long term than an on-the-limit error corrected signal from a sub-standard cable. Anyone who has ever experienced sparklies on the picture and seen it cured by swapping to a higher grade cable would be happy to vouch that whilst you can get a picture digitally it may not be a good one. It is true that the difference between cables is less noticeable at shorter lengths and it is no coincidence that the longer the HDMI cable is the thicker the screening is!

To sum up:

Things that will reduce the quality of the signal:

Long cables, wall plates, passive cable couplers, non-powered switch boxes, tight bends or short loops with the cable.

Things that will improve the quality of the signal:

Short cables, signal boosters, distribution amplifiers (will act as a signal booster), powered switch boxes (will act as a signal booster).

Aavara High Definition HDMI Cables

These are top specification Hi-Definition AV Cables fully supporting all of the latest HDMI specifications, including: 3D, 4K, ARC (Audio Return Channel), HEC (HDMI Ethernet Channel). The construction features pure gold 24K plated end shell and connector with a protective braided cable sheath.

Specifications:
• Works with PS3, XBOX, Blu-Ray/HD/DVD player, Set Top Box
• 1.2Gbps Ultra Wide bandwidth enable brilliant 1080p HD content and 8 channel Audio
• Exclusively Superior Diamond cutting design and stylish yellow webbing lines
• HDMI to DVI interoperability allows easy interconnectivity
• Support Dolby True HD and DTS-HD Master Audio Transmission
• Support x.v. Colour Wide Gamut and 16bit Deep Colour Video Transmission

Code		
Code HDAV05	0.5m version	£14.99
Code HDAV1	1m version	£17.99
Code HDAV2	2m version	£12.99
Code HDAV3	3m version	£24.99

180 Degree swivel Plug

High quality 'High Speed with Ethernet' HDMI cable. Each plug has 180 degree swivel to make it easier to connect to awkward sockets.

NEW

Specifications:
• Gold plated terminals with moulded strain relief

Code HDHD141S	1m version	£14.99
Code HDHD142S	2m version	£19.99
Code HDHD143S	3m version	£24.99

Bend to shape HDMI cables

From CYP, these "Neat & Tidy" cables provide genuine innovation for the custom installer. The reinforced structure allows them to be manipulated into a desired shape which will be retained for the duration of an install. This new design allows installers the make tidiest of finishing touches to an AV installation, while also optimising the connection between sources in a rack.

Specifications:
• Full 1080p and deep colour resolutions
• 3D Compatible
• 99.999% Oxygen Free Copper

NEW

Code HDMI030	30cm version	£10.62
Code HDMI050	50cm version	£11.39
Code HDMI075	75cm version	£12.37

Aavara Hi-Definition Pro Install HDMI Cables

These are top specification Hi-Definition AV Cables designed for Professional and Commercial installations. Designed to end the uncertainty and erratic behaviour you may have experienced from some of the other longer length cables on the market, these deliver reliable results. The construction features a heavy duty metal-moulded connector housing with high density triple layer shielding to guard against electromagnetic interference, high-level OFC copper wire with 340MHz (10.2Gps) ultra-wide bandwidth for 1080p 3D video format and 7.1 channel audio. Protective braided outer cable sheath.

Specifications:
• HDMI™ 1.4v high speed Cable supporting 3D, 4K, ARC (Audio Return Channel)
• 24K Gold-plated connector for anti-corrosive and distortion-free

Code HDPROAV5	5m	£29.99
Code HDPROAV10	10m	£59.99
Code HDPROAV15	15m	£89.99
Code HDPROAV20	20m	£119.99

NEW

MICRO HDMI range

Cables a standard type A HDMI plug at one end to the micro type "D" connector (6.4mm x 2.8mm) at the other, commonly used on mobile phones.

|		
Code HDHDMIC1	length 1.0m	£9.99
Code HDHDMIC15	length 1.5m	£11.99
Code HDHDMIC2	length 2.0m	£13.99

MINI HDMI range

Cables with a standard type A HDMI plug at one end to the mini "C" type connector (10.42mm x 2.42mm) at the other, commonly used on camcorders and other portable AV devices.

Specifications:
• Fully wired 19pin connectors
• HDCP compliant
• High Speed rated
• Up to 1080p resolutions
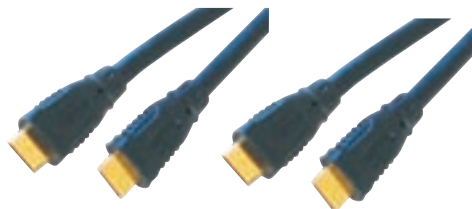
HDMI plug to HDMI mini plug

Code HDHDM2	length 2.0m	£9.99
Code HDHDM3	length 3.0m	£12.99

HDMI mini plug to HDMI mini plug

Code HDMHDM2	length 2.0m	£9.99
Code HDMHDM3	length 3.0m	£12.99

Value Range

High Speed with Ethernet

NEW

Code HDHD1405	length 0.5m	£3.99
Code HDHD141	length 1m	£4.99
Code HDHD1418	length 1.8m	£11.99
Code HDHD143	length 3.0m	£14.99
Code HDHD145	length 5.0m	£17.99
Code HDHD1410	length 10.0m	£34.99

Professional Range Flat Profile

Flat cable manufactured by TTL offering high speed performance 1440P with Ethernet and Audio return channel. Manufactured with gold plated contact and shell including RF Blok which protects against RF interference. Lightweight flat ribbon cable which is very flexible for installation especially where there is limited space.

Specifications:
• Capable of handling up to 1440p resolutions
• 3D compatable
• 4K x 2K ready
• High quality flat cable ideal for running under carpet or through narrow spaces
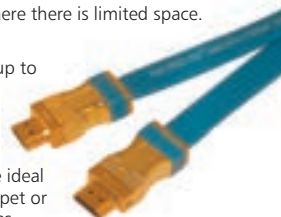
Code HDHDF1405	length 0.5m	£10.80
Code HDHDF1415	length 1.5m	£12.96
Code HDHDF1420	length 2.0m	£15.14
Code HDHDF1430	length 3.0m	£17.36

Ultra Slim HDMI Cables

At last, an HDMI cable that doesn't feel like it's trying to escape from the socket you've just plugged it into! These Ultra Slim cables cram everything you need for the full HD experience into a very slim flexible cable.

Features:
• HDMI V1.4 compliant
• Audio return Channel
• 3D support
• 4K x 2K resolution
• Deep colour support
• Ethernet up to 100Mbps
• 36AWG ultra thin flex cable with gold plated connectors

Code HDUS05	length 0.5m	£9.99
Code HDUS1	length 1.0m	£11.99
Code HDUS3	length 3.0m	£16.99

HDMI Extension Cables

HDMI PLUG to
HDMI socket extension
cable High speed.

NEW

Code HDHDE2	length 2.0m	£9.99
Code HDHDE3	length 3.0m	£11.99
Code HDHDE5	length 5.0m	£14.99
Code HDHDE10	length 10.0m	£24.99

HDMI to DVI Cables

HDMI plug to DVI plug
1080p rated.

Code HDDV2	length 2.0m	£7.99
Code HDDV3	length 3.0m	£12.99
Code HDDV5	length 5.0m	£14.99
Code HDDV10	length 10.0m	£19.99

HDMI Switchboxes

CONNECT 420 5:1 HDMI Switch 3D

- Only one cable to your TV screen! Switch between the HDMI devices connected
- Suitable for connecting 5 HDMI sources to your TV simultaneously. You just need 1 HDMI input and you never have to switch cables again
- Suitable for Full HD 1080p and all 3D formats
- With built-in repeater and equalizer for correcting any possible loss of signal, so you can connect up to 15 metres of HDMI cable to the output
- Switches automatically and/or with remote control
- Solid metal casing

Code C420 **£81.00**

CONNECT 310 3:1 HDMI Switch 3D

- Only one cable to your TV screen! Switch between the HDMI devices connected
- Suitable for connecting 3 HDMI sources to your TV simultaneously. You just need 1 HDMI input and you never have to switch cables again
- For connecting a game console like PlayStation and Xbox, Blu-ray Player, satellite receiver and all other HDMI devices
- Full HD 1080p
- Switches automatically and/or with remote control
- With separate IR receiver for operating the switcher when it is placed out of sight

Code C310 **£31.46**

AAVARA 4:1 Switchbox

The Aavara SW421 provides easy switching from any of four HDMI inputs to 1 HDMI output. Featuring CEC (Consumer Electronic Control) Pass-through for fast switching this is a very effective and economical solution.

Features:

- Allows access from four HDMI devices to 1 HDMI display
- CEC (Consumer Electronic Control) pass-thru (Output Channel 1)
- Support 36-bit Deep Color up to 1080p
- Support x.v.YCC wide color gamut
- Audio support Dolby TrueHD & DTS-HD™
- Support 7.1 digital surround & Lip Sync
- HDMI firmware upgradable

- Plug-and-play. Installs in seconds
- Dimension:245(W) x 107(D) x 27(H) mm
- Package Content:1080p HDMI Switcher 4:1, Remote Control, 9V DC Adapter, Usermanual

Code SW421 **£49.99**

HDMI Automatic 2:1 Line Powered Switchboxes

The smallest HDMI auto selector on the market! This is a very neat switchbox, two inputs to one output. They're line powered so you don't need to find room for another mains adaptor and they automatically switch to whichever input device was switched on last (with a manual override should you wish). Brilliant, neat, tidy and very affordable - just fit it and forget it!

Features:
• No need to make space for another piece of hardware
• Integrated high quality 0.5m HDMI Cable removes need to purchase additional cable
• Fully HDCP Compliant
• Automatically switches to equipment source when switched on
• Manual override switch
• Self powered. No additional PSU required!
• With plastic end connectors and regular shielded cable

Code 28577H   **£29.99**

HDMI Switchboxes Value Range

Compact low cost HDMI switchboxes offering excellent value for money. Auto source selection (plus IR for SW103).

Features:
• Easily switch between HDMI sources
• Full HD 1080p supported
• Compatible with HDMI 1.3b and HDCP

Note – not suitable for DVI devices (no control signal for auto switching)

| Code SW102 | (two inputs to one output) | **£24.99** |
| Code SW103 | (three inputs to one output) | **£29.99** |

HDMI 3:1 3 in 1 Out Micro Switchbox

This is a really tiny yet fully functional 3 to 1 HDMI Switchbox. It will switch between 3 HDMI sources (in multiple resolutions up to 1080p) and route the signal to an HDMI output. The unit will switch automatically to the device turned on, and can also be manually switched via the push button. An LED indicates which input is selected. The case dimensions are just 52 x 52 x 18mm!

Features:
• Supports 12-bit deep colour, full 1080p
• Intelligent or manual switching
• Supports HMDI 1.3b
• High performance up to 2.5Gbps
• Maintains high resolution video HDTV up to 1080p 2k, 1440p graphics and computer resolutions up to 1920 x 1200
• No power needed

Code HDMIM3   **£18.99**

HDMI 3 X 2 Switcher Splitter Value Range

The HDMI Amplifier Switch Splitter is an HDMI splitter with the ability to switch between 3 inputs to display to 2 outputs. It distributes the input into the two identical outputs simultaneously. Each output can achieve a long distance transmission of a HDMI signal of up to 15 metres. Two or more products may be cascaded to achieve a larger distribution and longer length. Operation is by front push button control or by (supplied) IR remote.

Features:
• Switch easily between any three HDMI sources to two displays
• Support HDMI1.3b
• Support highest video resolution 1080p
• Support 225MHz/2.25Gbps per channel (7.5Gbps all channel) bandwidth
• Support 12bit per channel (36bit all channel) deep colour
• Support HDCP

Note - Devices with DVI output are not supported due to the lack of signal control.

Code HDMI32S   **£49.99**

Code QU12S   (1 input to 2 outputs)   **£145.06**

HDMI Distribution Amplifiers

Each product in this Distribution Amp Series is compatible to V1.3 specifications. Besides splitting and distributing, this HDMI V1.3 Distribution Amplifier also does signal amplification and equalization, so as to provide high performance for both audio and video.

Features:

- Compliant with HDMI 1.3, HDCP 1.1 and DVII.0 standards
- Supports a wide range of PC and HDTV resolutions from VGA to UXGA and 480i to 1080p
- HDCP keysets allow each output to work independently when connecting to a HDMI display. HDMI cable distance test with 1080p resolution at 30 metres for both video and 5.1 audio when using quality cables
- HDCP Compliant
- Supports DVI source and DVI display by using DVI to/from HDMI adaptor/cable

Code QU14S   (1 input to 4 outputs)   **£262.87**

Code QU18S   (1 input to 8 outputs)   **£407.44**

AAVARA PS124 HDMI 1080p Splitter 1 to 4

The Aavara PS124 is an HDMI v1.3b 1080p distribution hub that sends the same HDMI video output to four HDMI HDTV digital screens. It is a flexible solution to integrate multiple displays in signage, video wall or demo shelf.

NEW

Features:

- Distribute HDMI signal to 4 HDMI displays
- Daisy Chain up to 3 layers /256 displays (4 x 8 x 8)
- CEC (Consumer Electronic Control) pass-thru (Output Channel 1)
- Support 36-bit Deep Color up to 1080p
- Audio support Dolby® TrueHD & DTS-HD™
- Support 7.1 digital surround & Lip Sync
- Plug-and-play. Installs in seconds

Specification:

- HDMI Spec:1.3b Compliant
- DVI Spec.:1.0 Compliant
- HDCP Spec.:1.2 Compliant
- CEC:Allows 1 TV remote to sync interoperability between display/projector and HDMI AV devices connected
- Dimension:245(W) x 107(D) x 27(H) mm

Code PS124   **£119.00**

HDMI Distribution Amplifiers

These Coosis HDMI Distribution amplifiers are compact devices that give multiple simultaneous HDMI outputs from one HDMI input, ideal for viewing on multiple displays. The units can also be cascaded together in a "pyramid" network to provide a one-to-many solution.

Please note: If the max resolutions of your displays are different, the EDID functionality will detect all the connected displays' EDID information and auto-match the output resolution to the lower one. For example, if one display supports 720P resolution and the rest support 1080P, the signal will be lowered to 720p for all displays.

Blu-ray 3D Compatible

Code HDC12	(1 input to 2 outputs)	£34.99
Code HDC14	(1 input to 4 outputs)	£74.99
Code HDC18	(1 input to 8 outputs)	£114.99

QU-8MS v1.3 HDMI 1 to 8 Splitter with System Reset

Each splitter in the Quantum Distribution Amplifier Series is compatible to v1.3 HDMI specifications, supporting 'Deep Colour' together with High Definition Audio. Each buffered output can run 1080p up to 15 metres and can also be cascaded.

Features:
- v1.3 HDMI, HDCP 1.1 and DVI 1.0 compliant
- HDMI 1 to 8 Splitter with System Reset function
- Resolutions supported: PC - VGA to UXGA; HDTV - 480i to 1080p plus 1080p24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Auto signal amplification & equalisation improves signal transmission distances
- Supports CEC bypass
- Supports 'Deep Colour' (10, & 12)
- Selectable EDID settings - TV (downstream) and STD (fixed)
- Power & SYNC LED's indicator
- Supports 3D signals

NEW

Specification:
- Input 1 x HDMI female port
- Outputs 8 x HDMI female ports
- Power 5V/5A DC (US/EU standards, CE/FCC/UL certified)
- Gross Weight 1240g
- Net. Weight 1000g

Code QU8MS   **£301.48**

Aavara PM4X2 1080p HDMI 1.3b MATRIX 4X2

The Aavara PM4X2 1080p HDMI 1.3b MATRIX 4X2 is a switcher/splitter hub that offers you maximum convenience in HDMI signal distribution when you have multiple HDMI sources and displays to connect together. Each of the Four HDMI sources can be directed to any one of the two HDMI outputs so two displays/projector can show same source or two different sources simultaneously. It is compliant with Blu-ray DVD players and satellite set top boxes to any HDMI compatible display. Sources are accessible at any time to any display when operating with the IR remote. PM4X2 4x2 matrix switching allows maximum versatility for integrated systems.

Features:

- Allow to select same HDMI source or two different sources output to two displays separately
- "Max. Video Output" function for Home Theater installation, allow to send to TV and Amp with Max. Video and Audio signal
- HDMI Specification 1.3b Compliant
- Support HDMI 36-bit Deep Color & x.v.Color wide color gamut
- Supports 480i, 480p, 576i, 576p, 720p, 1080i and 1080p resolution
- Audio support Dolby® TrueHD & DTS-HD™ lossless 7.1 digital surround & Lip Sync
- Plug-and-play. Installs in seconds
- Easy operating with IR Remote

Specifications:

- HDCP Spec.:1.3b Compliant
- DVI Spec.:1.0 Compliant
- HDCP Spec.:1.2 Compliant
- MATRIX 4X2:Transmit same source or two different sources simultaneously
- Operation temperature:+5ºC to +35ºC
- Storage temperature:-20ºC to +60ºC
- Humidity Range:5% to90% RH
- Signal Rate:6.75Gbps
- Power Consumption:5W
- Video Bandwidth:225 MHz
- Single Link Range:Supports 480i, 480p, 576i, 576p, 720p, 1080i and 1080p resolution
- Cable Length:5M (In and Out respectively)
- Dimension:245(W) x 107(D) x 27(H) mm

Code PM4X2   £**193**.37

HDMI Matrix Switchers Value Range

These are true HDMI Matrix switchbox that routes any of the four HDMI inputs to any or all of the outputs. Input routing by front panel push button or IR remote control with LED confirmation. Matrix switching allows for maximum versatility for integrated systems.
Superb value for money.

Features:

- Switch easily between any four HDMI sources
- Distributes any of the four inputs to any or any combination of the two HDMI output displays
- Support HDMI 1.3b
- Support highest video resolution 1080p.
- Support 225MHz/2.25Gbps per channel (6.75Gbps all channel) bandwidth
- Support 12bit per channel (36bit all channel) deep colour
- Support HDCP
- External 5V DC@2A Power Supply (included)
- Easy operating with IR Remote

*** Note - Devices with DVI output are not supported due to the lack of signal control ***

Four inputs to two outputs	
Code HD42M	**£84.99**
Four inputs to Four outputs	
Code HD44M	**£299.99**

HDMI over IP Network

As well as HDMI over (dedicated)Cat5 cable we can now offer transmitter / receiver systems that will send HDMI signals via an IP computer network. Amazingly they place very little load on your network bandwidth an operate as a true multicast - that is to say one transmitter can drive multiple receivers with no extra network load! They really are extremely simple to operate, just plug and play with no in-depth networking

capability required. They also provide full IR feedback allowing remote control of source equipment. A flexible, scalable, low cost solution to distributing HD signals to multiple displays. They can be used in Extender Mode (connect the Sender to the Receiver by CAT5e/6/7 cable directly) or Broadcaster Mode (Sender to Receiver via LAN) for one Sender to many Receivers.

PB5000P

The newly updated PB5000Plus units now provide IR feedback and RS232 control

and deliver stunning Ultra High Quality 1080p HDMI Video broadcast over IP network.

Via an inexpensive Gigabit Ethernet network switch the PB5000P can support Point to Point, Point to

Many Broadcasting, and Multi-Casting which multiple video sources with PB5000+ Senders video streaming to multiple TVs/Displays/Projectors with PB5000+ Receiver. Multi-casting can be done by Managed Gigabit Switch with 802.1Q VLAN function which provide control remotely and allows more video source/senders to be integrated.

PB5000P

Features:

- 1080p Ultra High Quality Video transmission and up to 16 Groups Multi-Casting
- Flexible and scalable HDMI 1080p broadcasting with Gigabit Ethernet LAN
- 1 to 1, 1 to many & multi-casting broadcasting architecture, adding more displays without adding LAN bandwidth loading
- Multi-Casting group with Gigabit Ethernet managed switch (required 802.11Q VLAN & IGMP function) support, up to 16 multi-casting group support
- 16 sets C class IP Dip switch configuration on both Sender & Receiver for easy Multi-Casting group matching

- IR Pass-Thru on 1 to 1 extender configuration
- Up to 16 Groups Multi-Casting
- IR Control Pass Thru
- Two Way RS-232 Command Unicast Broadcast for control from remote site
- Easy Dip Switch Matching for Multi-Casting Group configuration
- New EDID Copy/Video Mode Switching Button for Optimal Video Performance
- Video Wall function support for up to 8x16 displays by Easy Web Interface Configuration
- Optional PoE support upon request

Specifications:

- Video Resolution:480i/p, 576i/p, 720p, 1080i/p
- Sender Connector:Power Adapter in, RJ45, RS232, IR Emitter Connector, HDMI
- Receiver Connector:Power Adapter in, RJ45, RS232, IR Receiver Connector, HDMI out
- HDMI Spec.:1.3 Compatible
- DVI Spec.:1.0 Compliant
- HDCP Spec.:1.2 Compliant
- Link Connector:RJ45
- Power Consumption:3.2W
- Audio System:Stereo L/R
- Audio Resolution:16bit 48Khz
- max CAT5 Cable Length:100M
- Power Adapter:DC 5V/2A

PB5000P   **NEW**

Code PB5000P	Sender/Receiver pair	£524.54
Code PB5000PR	Additional receiver	£394.62

HDMI over Single Coaxial Extender

Yet another really useful way to get HDMI from one place to another, the PCE122 can send ultra high quality HDMI v1.3 over a single coaxial cable! (RG6 or RG59). It can send full HD 1080P at up to 120M or 720P up to 230M, both with full 7.1 channel audio. The conversion is fully digital (HDMI to SDI and back again) with no additional compression and gives you crystal clear HD at long distances. The PCE122 also contains a built-in 1 to 2 Coaxial Splitter to drive two separate receivers and each receivers has a loop-through to daisy chain additional receivers as required. Cables are connected via BNC for a secure, vibration resistant connection.

Specifications:
- 120M HDMI 1080p video and 7.1channel audio One Cable transmission with Ultra High Quality Video
- Features World Leading Single Coaxial Transmission, designed to simplify Installation
- 1080p 120M / 720p 230M long distance Ultra High Quality Video with 7.1 channels surround sounds transmission
- Up to 7.1 channels audio, Dolby® Digital / Dolby® TruHD/DTS®-HD pass-thru
- Built-in 1 to 2 Coaxial Splitter in Sender and One Coaxial Cascade output in Receiver for great extension flexibility
- Support 5 layers Cascadable for up to 600M 1080p video transmission and up to 10 TVs/Displays/Projectors connected
- BNC connector designed for solid coaxial connection
- HDMI v1.3b, HDCP Compliant
- Hassle free plug-n-play, install in seconds

PCE122 with IR feedback:

Code PCE122IR	(transmitter & receiver pair with IR)	**£542.61**
Code PCE122RIR	(additional receiver with IR)	**£315.70**

HDMI over CAT5

These products make a very affordable method of sending HDMI over long distances whilst preserving the full HD capability. The transmitter converts the HDMI signal into a balanced differential signal and the receiver converts it back into a conventional HDMI signal again. It uses two runs of CAT5E (or CAT6) cable and allows for full auto-adjustment of feedback and equalisation with no user-intervention required.

Long HDMI cables are expensive and unwieldy, whereas CAT5E cable is cheap and flexible making it much more suitable for long distance runs. The HDMIC50 can send HDMI at full 1080p up to 50m (up to 100m at 480p!) They can also be used for DVI-D signals with a suitable adaptor such as the KA169. The HDMIC530 is rated at 1080p at 30m and 480p at 60m.

Specifications:
- Input Video Signal: 0.5 -1.0 volts p-p
- Input DDC Signal: 5 volts p-p (TTL)
- Maximum Single Link Range: 1920X1200, 1080P
- Output Video: HDMI 1.3
- Video format supported: DTV/HDTV 1080P/1080i/720P/576P/480P/576i/480i
- Size: 45 x 25 x 81mm
- Power Consumption: 5W (max.)
- Operating Temperature: 0 to +70 C
- External Power Supply: 5V DC@2A
- HDMI V1.3 compliant

Code HDMIC530	**£39.99**
Code HDMIC550	**£59.99**

HDMI over Single CAT5

50M System. Some HDMI over CAT5 transmitters require two runs of CAT5 cable. This new item can do the same job with a single run of CAT5 cable, great for adapting existing installations. The modules are plug and play with full auto-adjustment of feedback and equalisation and no user-intervention required.

Specifications:
- Input Video Signal 0.5 -1.0 volts p-p
- Output Video HDMI 1.2a
- Video format supported
- DTV/HDTV 480i/576i/480p/576p/720p/1080i/1080P
- Transmission distance
- CAT-6 cable 50M for1080p
- Operating Frequency
- Video Amplifier Bandwidth 1.65Gpbs/165MHz
- Vertical Frequency Range 50/60Hz
- Resolutions(HDTV)
- Interlaced(50&60Hz) 480i,576i,1080i
- Progressive(50&60Hz) 480p,576p,720p,1080p

Please note, in order to achieve the quoted transmission distances please use only CAT-5e or CAT-6 cable.

Code HDEX344 **£99.00**

PU-107 Pure digital v1.3 HDMI over single CAT6 transmitter and receiver

The PU-107 can send and receive a pure digital v1.3 HDMI signal over a single CAT6 cable allowing HD Audio & 'deep colour' support.

Features:
- v1.3 HDMI, HDCP 1.1, DVI 1.0 compliant
- v1.3 HDMI over single CAT6 transmitter and receiver set
- Resolution supported: HDTV - 480i to 1080p including 1080p24fps
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM
- Supports CEC bypass
- Supports xvYCC
- Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality
- Supports Deep Colour (up to 12 bit)

Specification:
- **Inputs**: Transmitter: 1 x HDMI female port. Receiver: 1 x 1 x CAT6 port
- **Outputs** Transmitter: 1 x CAT6 port. Receiver: 1 x HDMI female port
- **Power:** 2 x 5V/1A DC (US/EU Standards,CE/FCC/UL Certified)
- **Dimensions:** 78mm (W) x 72mm (D) x 30mm (H) each

Code PU107   **£150.00**

Gigavideo 821 Wireless HDMI Sender

At last, a cable free solution for HDMI. The transmitter has two HDMI inputs and includes a local HDMI pass-through output so you can still view the sources locally. Switch between any of the two inputs and watch the output cable free at a distance of up to 30m (clear line of sight, or typically 15m through walls). The signal is uncompressed so the output will stay as true HD up to and including 1080p. Naturally there's built in IR feedback so you can control the source from the viewing area.

Features:
- Replace your HDMI cable wirelessly and locate your HDTV or projector wherever you want
- Mount the receiver (out of sight) behind your HDTV or on the ceiling next to your projector. No more visible cables
- Watch up to 2 (HD) devices such as Blu-ray® players, digital video recorders (DVRs), HD set-top boxes, PS3™ or Xbox® game consoles or standard DVD players/recorders elsewhere in your home and easily switch between the sources connected without changing plugs
- The built-in HDMI splitter means that you can also connect an HDTV to the Transmitter so that you can continue to watch the connected devices locally
- Operate your A/V sources from anywhere, even through a wall or cupboard door, using the IR receiver
- The HD signal does not experience any delays and is therefore perfect for game consoles
- Digitally supports all 480p, 720p, 1080i and 1080p (Full HD) resolutions from up to 30 metres
- 100% HDCP compliant

Sends the HD signal uncompressed.

GV821

GV811

Code GV821   **£265.00**

Also available - GV811. A compact model for in-room use in-room (10m range with clear line of sight). Single HDMI input & without IR feedback. See www.keene.co.uk for full specification.

Code GV811   **£249.99**

HDMI Signal Repeater 1080p Value Range

Use one of these to join two HDMI cables and extend the maximum cable distance. The repeater contains circuitry to regenerate the HDMI signal and extend the effective cable length while maintaining all signal components present within the encoded signal, including stereo or 5.1 audio and HDCP encryption. Multiple devices can also be daisy chained as required up to any cable length.

Specifications:
• Extends high definition video and digital audio using a single box solution
• Up to 30m Max cable length. also cascadable
• HDMI Amplifier Bandwith: 1.65GHz
• Dimensions 5 x 2.8 x 1.8cm
• HDMI V1.3 compliant
• Power: DC 5v 170mA max (In most cases, the repeater is able to use the power from the appliance, and no external power adaptor is required)

Code HDMIRV **£14.99**

HDMI four way auto switch

The HD-SW104 is an intelligent HDMI amplified 4 port switch. It allows four HDMI devices to be switched to one HD Monitor, Projector or HD TV.

The intelligent function will automatically switch between HDMI sources as and when they are plugged in, removed or turned off, plus there is also touch button and IR remote control.

Specifications:
• 4 Port HDMI Switch
• HDMI v1.3b
• Supports up to 1080p
• Supports 250Mhz/2.5Gbps per channel bandwidth
• Supports 12-bit per channel deep colour
• Supports HDCP pass through

Code SW104 **£39.99**

CAT5 & Networking Cabling

UTP CAT5E Cable

Unshielded 4 pair twisted cable. 24AWG non-plenum horizontal (solid conductor). Beige sheath metre marked, with rip cord (305m pack only). ANSI/EIA/TIA-568-A-5, ISO/IEC-11801/BS EN 50173, UL444, UL1581, UL 1666 approved. Order loose by the metre or by the 305m pack.

Code KBL23	1-10m	**£0.49/m**
	10+m	**£0.40/m**
	305m reel	**£109.80 (0.36/m)**

Couplers & Connectors

CAT5E coupler, back to back RJ45 sockets.

Code C5EC		**£4.99**
Code C5EC	buy 5	**£20.00**
Code C5EC	buy 10	**£30.00**

RJ45 clear plastic crimp-on end connector, suitable for KBL23xx cable.

| Code RJ45C | (CAT5) | **£0.49** |
| Code CAT6C | crimp on connector CAT6 rated for KBL33 | **£0.99** |

RJ45 crimp tool for easy fixing of RJ45 end connectors.

Code RJ45T **£9.99**

UTP CAT6 Cable

Unshielded 4 pair twisted cable. 24AWG non-plenum horizontal (solid conductor). Flame retardent grey sheath with rip cord (305m pack only). Order code [KBL33] loose by the metre or 305m pack in easy-pull box.

Code KBL33	1-10m	**£0.78/m**
Code KBL33	10+m	**£0.68/m**
Code KBL33	305m reel	**£173.85 (0.57/m)**

CAT5 Outlet Components

RJ45 fascia plate for network connections containing IDC connections for UTP cable (suitable cable KBL23/KBL33). A clip-in ID plate allows for easy labelling.

Single port version

Code UTPSP	**£5.99**

Twin port version (pictured)

Code UTPTP	**£7.99**

Surface mount pattress box 25mm deep for use with CAT5 fascia plates

Code UTPP	**£2.99**

Pattress box 45mm deep has breakouts for cable entry on four sides and bottom

Code NPB	**£1.99**

CAT5E/6 Patch Leads

Product description
• Colour: Grey
• Connectors: 2 x RJ45
• Applications: 10BaseT, 100BaseTX & Gigabit Ethernet
• Crossed connections = NO

Code UTP05	(L) 0.5m grey	**£1.49**
Code UTP10	(L) 1.0m grey	**£1.49**
Code UTP20	(L) 2.0m grey	**£1.99**
Code UTP30	(L) 3.0m grey	**£3.99**
Code UTP50	(L) 5.0m grey	**£4.99**
Code UTP100	(L) 10.0m grey	**£8.49**
Code UTP200	(L) 20.0m grey	**£10.99**
Code UTP300	(L) 30.0m grey	**£19.99**

HDbaseT HDMI extender System

This is quite a product! The Aavara PE3D4K100A is a another fantastic tool for installers. Using just a single wire it can be easily retrofitted within an existing network. HDBaseT technology allows this system to send HDMI further and at higher quality than all other conventional HDMI over CAT5 solutions. With no compression and no loss of quality you can get crystal clear 3D 1080P with 7.1channel audio, and also have IR control, RS232 and extend your 100Mbps LAN all over the one cable!

NEW

Over one single run of CAT5 cable you can:
• send uncompressed full HD 3D HDMI with 7.1ch audio
• remotely power the receiver
• IR control the source from the receiver
• RS232 control the source from the receiver
• use the 3 port hub in the sender & receiver to extend your LAN

It also fully supports HDMI v1.4, allowing smooth 3D video transmission from 3D Blu-ray players to 3DTVs, with fully HDCP compliance. Built-in 3 x 100Mbps Fast Ethernet RJ-45 ports at both sender and receiver allow Internet connected withTV, Video device and PC, keeps link with Internet. Power Over Cat5 Cable design makes Receiver side powered directly without extra power adapter to Receiver unit. Convenient IR Pass-Thru function allows video sources to be controlled via IR remote control from TV/Display which may be located some distance away.

Code PE3D4K100A **£538.28**

Features:
• Transmit up to 100M Uncompress 1080p HDMI signal via CAT5e/6/7 Cables
• 10.2Gbps Ulrat High Performance Transmission support up to 4Kx2K Resolution
• HDMI V1.4 3D Video Format Support for 3D blu-ray and TV connection at distance
• 36 bit Deep Color & CEC Pass Thru support
• POC (Power Over CAT5) support, Receiver no Power Adapter needed
• Ethernet Extend support, 3 x 100Mbps Ethernet RJ-45 switch at both Sender & Receiver
• Full range 20~60Khz IR Pass-Thru allows to control Video Source from receiver side
• Two Way RS-232 Control communication for Display or video Source control at remote site
• Hassle free plug-n-play, install in sec
• HD Audio/ Video/Internet/ IR& RS232/Power, all in ONE SINGLE Cable Link

Target Applications:
• HDMI Spec.:1.4 Compatible
• DVI Spec.:1.0 Compliant
• HDCP Spec.:1.1 Compliant
• Data Speed:Up to 10.2Gbps
• Ethernet Network Data Spe:100/10 Base-TX
• Ethernet Port: 3x RJ-45 Ports at Sender & Receiver
• RS-232c connector:DB-9 Stanard Female Connector, Bi-direction transfer & up to 192,000 bps
• IR Pass-Thru:Signal frequency 20-60Khz
• Sender Connector:HDMI Input*1, HD AV Link(RJ-45) Port*1, Ethernet RJ-45 Port*3, RS232c*1, IR Emiiter Port*1 DC 24V Input*1
• Receiver Connector:HDMI Onput*1, HD AV Link(RJ-45) Port*1, Ethernet RJ-45 Port*3, RS232c*1, IR Receiver Port*1
• Power Adapter:AC to DC Power Adapter 24V/1A
• Product Dimension:220x83x27mm

HDMI extender over CAT5 with IR control

This product makes a very affordable method of sending HDMI over long distances whilst preserving the full HD capability. The transmitter converts the HDMI signal into a balanced differential signal and the receiver converts it back into a conventional HDMI signal again. It uses two runs of CAT5E (or CAT6) cable and allows for full auto-adjustment of feedback and equalisation with no user-intervention required. This model also provides IR feedback along the same CAT5 cables for control of source equipment from the viewing area.

Long HDMI cables are expensive and unwieldy, whereas CAT5E cable is cheap and flexible making it much more suitable for long distance runs. This pair of units can send HDMI at full 1080p up to 50m and can also be used for DVI-D signals with a suitable adaptor such as the KA169

Features:
• Watch and operate your HD Content elsewhere on your TV
• Watch films, look at photographs and listen to music from, for example, your Media Centre PC, Blu-Ray player, game console, set top box or hard-disk recorder on a different TV/projection screen in perfect HD quality
• Operate your connected A/V equipment remotely via the infrared return signal
• Wired signal transmission up to 100 metres!
• Optimum price/quality ratio as a result of using CAT5e/CAT6 cabling
• Retention of Full HD 1080p image and sound quality for up to 60 metres
• Free from interruption due to solid metal, interference free housing

NEW

Code MEG61 **£80.10**

HDMI Analyser

The XA-1 is the perfect analysis tool for AV installers and integrators. This device allows the user to analyse AV sources for resolution and EDID information whilst also providing pattern generation and test functions for identifying display capabilities. This small but advanced HDMI analyser also supports the analysis and pattern generation of 3D signals. This allows the user to check compatibility between sources and displays and provides a means of identifying system problems for troubleshooting.

Features:
• Supports v1.4 HDMI Audio Return Channel (ARC) function
• Support timings include SD, HD up to 1080p, PC up to WUXGA and 3D
• Analyse input source info-frame and output sink EDID
• Deep color video support up to 12-bits
• HD resolutions supported - 480i to 1080p + 1080p24fps
• PC resolutions supported - VGA to SXGA + WUXGA
• 3D modes supported - Frame Packing (720p@50/60, 1080p@24); Side-by-Side (half)(1080p@24/60, 720p@50/60); Top-and-Bottom   (1080p@24/60, 720p@50/60)
• Provides 25 timings and 6 patterns
• OLED show Input / Output timing information
• Support input signal bypass, digital video formats in Deep Color Mode at up to 36 bits (12bits/color) and new lossless compressed (Dolby TrueHD, Dolby Digital Plus and DTS-HD master Audio) digital audio
• Supports internal pattern audio LPCM 2CH 48/96/192KHz, LPCM5.1 48/96 kHz, LPCM7.1 48/96KHz

Code XA1 **£300.31**

HDMI to VGA & Audio Convertor

HDMI in to VGA and decoded analogue audio out

This unit will take in HDMI and give out VGA with analogue stereo audio.

HDMI 1.3 compatible

Supported input resolutions: 4801/P, 576i/P, 720P 1080i/P

Specifications:
• Video Input: HDMI socket
• Audio Output: 3.5mm jack socket
• Video Output: 15pinHD VGA connector
• Dimensions: (WxHxD): 84 x 28 x 76mm
• Power: 5V 2A (UK mains adaptor supplied)

Code CHUHV **£59.99**

HDMI to Component Convertor

HDMI to Component Video (Y-Pb-Pr) and stereo audio. Convertor allows you to enjoy your high definition image & sound when watching movies or playing games on the older component TVs or projectors that do not have an HDMI input. It offers solutions for digital entertainment centre, HDTV retail and show site, HDTV, STB, DVD and Projector factory, noise space and security concerns, data centre control, information distribution, conference room presentation, school and corporate training environments.

Features:
- Input: 1 × HDMI
- Output: 1 × Component Video, 1 × Stereo Audio
- Easy to Use: Installs in seconds, no settings and it is a resolution pass-through converter
- It is purely for conversion between video formats but will not convert the input/output video resolutions
- Audio output format: 2 channel LPCM
- Supports 165MHz/1.65Gbps per channel (6.75Gbps all channel) bandwidth for HDMI Input
- HDMI resolutions: 480P@60Hz, 576P@50Hz, 720P@50/60Hz, 1080i@50/60Hz
- Component Video resolutions: 480P@60Hz, 576P@50Hz, 720P@50/60Hz, 1080i@50/60Hz

Code HDCVC **£69.00**

HDMI Cross Convertor

This HDMI Scaler can accept audio embedded in the incoming HDMI signal or from the separate Toslink or analog Stereo inputs. The HDMI output can be the same resolution or scaled to a different resolution. Output audio is simultaneously present embedded in the HDMI signal and separately as Toslink and analog Stereo. This provides maximum flexibility for systems integration. The unit is ideal for situations where the HDMI source resolution and/or frame rate is incompatible with the display device's resolution/frame rate. A comprehensive OSD menu and buttons allows selection of output resolution, adjustments of picture quality and audio source selection. It's also possible to add up to 150ms of audio delay to compensate for lip sync errors.

Features and Specifications:
- HDMI v1.1, HDCP 1.1 Compliant
- Maximum I/O Resolutions WUXGA and 1080p
- Accepts 480i or 576i SDTV input
- Automatically Detects Input Resolution
- 50/60Hz Frame Rate Conversion

Code 1TVS626 **£156.66**

HD UltraBridge

A powerful multi-format HD video switcher, the UltraBridge has:
- 1 X Component (YPbPr) video and audio inputs (480i/p, 576i/p, 720p 1080i/p (60Hz/50Hz))
- 1 X VGA video input and stereo audio input: (up to 1920 X 1200 (60Hz))
- 1 X S-video video input and L/R audio input
- 1 X Composite video input and L/R audio input
- 2 X HDMI input: supports 480i/p, 576i/p, 720p/1080i and 1080p at 50/60Hz
- 1 X USB 2.0 input supports to read contents of hard disk or flash drive and files (will read mpeg 1/2/4, rm, rmvb, mov, jpeg, bmp, png, wma, mp3) All inputs can be switched to 1 scaleable HDMI output at up to 1080P

Code UBRIDGE **£274.99**

VGA to HDMI Convertor

Allows you to display the image from your computer to a monitor or large TV. It will convert your PC's VGA video and audio into one complete HDMI signal.

Features:
- Converts VGA video and audio into one HDMI signal
- Signalling rates up to 1.65Gbps
- HDCP Compliant
- Supports up to 1080p resolution
- Supports 480i, 576i & 1080i resolution
- Supports VGA resolutions up to 1280 x 1024 60/75Hz
- Outputs HDMI 1.2a

Code VGAHDMI **£59.00**

AU-11CA HDMI Audio Embedder with built in Repeater

The AU-11CA Audio Embedder lets you insert an external audio signal into any HDMI source. The device allows you to insert analogue or digital stereo and multi-channel digital surround sound signals (via Optical) to give users the capability to overcome audio issues within complex HDMI installation. The AU-11CA also repeats the HDMI signal to allow an extended total HDMI cable range.

Features:
• Compliant with HDMI v1.3 , HDCP 1.2 and DVI 1.0
• Supports Optical Sample Rate up to 96 kHz
• Supports LPCM Stereo, DTS and Dolby Digital via Optical input
• Supports up to 24bit resolution digital audio
• HDMI cable distance testing showed that with 1080p 8bit/12bit resolution, the input/output distance is up to 10 meters
• Low power consumption
• Supports HDMI Sample Rates up to 192 kHz

Specification:
• Inputs 1 x HDMI, 1 x Optical, 1 x Analogue Stereo (2 x RCA)
• Outputs 1 x HDMI
• Power 5V/1A DC (US/EU standards, CE/FCC/UL certified)
• Dimensions 85(D) x 85(W) x 35(H)mm

NEW

Code AU11CA **£105.95**

HDMI Audio De-Embedder (5.1) with built in repeater

The AU-11CD is an advanced solution for repeating HDMI with integrated Audio de-embedding, up to 5.1. Connect the AU-11CD between your source and display via HDMI, and select the audio format required.

Features:
• Compliant with v1.3 HDMI, HDCP 1.2 and DVI 1.0
• Supports HDMI Sample Rates up to 192 kHz
• Supports Optical Sample Rate up to 48 kHz
• Supports TMDS clock frequency rate 225MHz
• Supports high-bit-rate (HBR) audio
• Input and Output HDMI cable length can run up to 10m at 1080p 8bit resolution
• Low power consumption
• Support built-in audio EDID switch of LPCM2, 5.1/7.1 or Bitstream
• Supports 3D signals

Specification:
• Inputs 1 x HDMI
• Outputs 1 x HDMI, 1 x Optical (Toslink), 2 x Analogue Audio L/R (RCA)
• Power 5V/1.2A, DC (US/EU standards, CE/FCC/UL certified)
• Dimensions 90mm (W) x 85mm (D) x 35mm (H)

NEW

Code AU11CD **£105.95**

RGB Scart & S-Video to HDMI 1080P HD Convertor

This device contains a high quality chipset to convert analogue Scart AV signals (RGB or composite, or s-video and upscale them to a choice of HDMI resolutions, 720p, 1080p, 1680x1050, 1360x768 and a choice of screen modes (16:9, 16:10, expand and subtitle). Control is by front panel or supplied IR remote. Great for connecting legacy equipment to an HDMI switchbox and for simplifying your connections.

Inputs:
• SCART - CVBS/y/c (PAL, NTSC), RGB (480i, 576i) s-video PAL (576i) NTSC (480i)

HDMI Output:
• 1920x 1080, 1680 x 1050, 1360x x768, 1280 x 720 with digital audio

Code HDUSPRO **£59.99**

Portabale VGA & Audio to HDMI Convertor

The Coosis VGA to HDMI Portable convertor is designed to be extremely compact in size and ideal for home and office use or life on the move. Users can plug this converter into their desktop, laptop or any device with a VGA output (must be an RGBHV type signal, not component or YUV!) and convert easily to HDMI. Great for watching PC and laptop signals on your big screen TV, or getting your presentation on to the office projector. The best thing is that resolutions of less than 1920 x 1200 @ 60Hz don't need any extra power although a USB power cable is included should you wish to use 1920 x 1200 @ 60Hz. An analogue audio input is included as a 3.5mm stereo socket and this is then output in the HDMI signal to the display.

Code VGAHDMIP **£49.99**

HDMI Down Converter

The VS-226 HDMI to CV/SV/Stereo Down Converter converts digital HDMI signals (or a DVI input signal with S/PDIF coaxial audio) to NTSC or PAL analog video signals and also provides a L/R stereo audio output. Besides S-Video and Composite Video outputs, it provides a re-clocked HDMI signal which delivers a jitter free bypassed output of the original HDMI signal. In addition, either a bitstream derived HDMI audio signal or a coaxial input signal is processed and provided to an external audio amplifier via a coaxial S/PDIF digital audio connector. The VS-226 provides a convenient way for the user to watch a high definition television program while also recording it in standard resolution via a DVR or VCR.

Features and Specification:
- Automatic Signal Conversion
- HDMI or DVI HDTV Signals from 480p to 1080p
- HDMI or DVI HDTV to NTSC or PAL Conversion
- Converts HDMMI Bitstream audio to S/PDIF Audio
- Provides analog L/R Stereo Audio Output
- Converts PC signals to UXGA/60Hz to NTSC/PAL

Important! Please be aware that this unit will not output composite video, s-video or stereo audio from an HDCP protected source. A source such as a Blu-ray or SkyHD usually uses HDCP and so only the HDMI loop-through and digital audio ouput will be active. If you would like any guidance with this please don't hesitate to contact us.

Code VS226   **£181.71**

HDMI V1.3 To Component or VGA Convertor

HDMI in to COMPONENT (or RGBHV) & AUDIO out.

This unit will take in HDMI and give out either Component video (Y, Pb, Pr) or RGBHV (PC signal), plus spdif or analogue stereo audio. It enables you to connect your new HDMI sources to older analogue displays. A manual selector switch allows you to choose between either of the two HDMI inputs. HDCP compliant

Specifications:
- Video Input: HDMI connector
- Compliant with HDMI 1.3 and HDCP 1.2
- Output: Analogue HD-15 (RGBHV / YPbPr)
- Operation frequency: up to 165MHz
- Resolution: RGBHV up to UXGA@60Hz, Component up to 1080i (note this unit will not scale the signal, the output resolution is determined by the resolution of the input signal – please check your display is compatible with the resolution produced)
- Dimensions: (WxHxD): 130 x 34 x 94mm
- Power: 5V 2A (UK mains adaptor supplied)

Code HDUHC   **£124.99**

Component to HDMI Convertor

COMPONENT and Audio input to HDMI output

This unit will take in a Component video signal plus analogue stereo audio and convert the output to digital HDMI.

HDMI 1.3 compatible

Supported Component input resolutions: 4801/P, 576i/P, 720P 1080i/P

Specifications:
- Video input: 3 x RCA phono
- Audio input: 2 x RCA phono
- Video Output: HDMI socket
- Dimensions: (WxHxD): 84 x 28 x 76mm
- Power: 5V 2A (UK mains adaptor supplied)

Code CHUCH   **£64.99**

HDBaseT HDMI Distribution Systems

New from CYP, a range of HDMI HDBaseT distribution amplifiers. Each model will take one HDMI input and send it uncompressed to two, three or even seven outputs. If you don't need the flexibility (and cost) of a full matrix system but want all the advantages that HDBaseT has to offer then these are perfect for both residential and commercial AV installations.

PU1H2HBTE

PU1H3HBTL

PU1H3HBTE

PU1H7HBTL

PU1H7HBTE

Code		Price
Code PU1H2HBTE	Two Way	**£419.24**
Code PU1H3HBTL	Three Way (Lite)	**£526.72**
Code PU1H3HBTE	Three Way	**£790.08**
Code PU1H7HBTL	Seven Way (Lite)	**£1053.44**
Code PU1H7HBTE	Seven Way	**£1669.88**

Please note PU514LRX receiver is supplied separately, please see website for details

Express Install Multi-room HDMI System

Express Installation Kit - 4 x 4 HDBaseT™ LITE Matrix with PU-514L-RX Receivers

This 4 by 4 HDMI HDBaseT™ Lite Matrix Express Installation Kit has been developed as a robust and cost effective solution at the heart of any four zone multi-room environment. Supplied complete with a HDBaseT™ Lite Matrix plus four PU-514L-RX receivers, the kit enables an installer to easily and confidently configure a 4-zone multi-room AV system using HDBaseT Lite technology and distribute content throughout the system over a Single CAT5e/6/7 cable infrastructure.

The Express Install Kit supports the transmission of video (resolutions up to 1080p Full HD and 1920x1200@60Hz), multi-channel digital audio, and control via IR, RS-232, or Web GUI/Telnet IP, from four high definition sources to four HDBaseT outputs over a single CAT5e/6/7 cable (up to 60m) for each output.

The PU-44XL-KIT is supplied with 4x PU-514L-RX receivers which utilise the 2-way IR control capabilities of the matrix.

Use the IP control feature to enable users to access and control the matrix remotely and also allow additional options for integration of third-party control systems. CYP provide control drivers for control systems such as Control 4, RTI, Crestron, AMX, Control FX, and Demopad. These are available at no extra cost.

Code PU44XLKIT   **£1746.82**

HDMI over CAT5E/5 Extender

One of the Professional series of HDMI Cat5 3D Extenders. The PE121L features 3D, IR and HDMI Ethernet Channel Pass-Thru, all via twin CAT5E cable. Fully compatible with Blu-Ray 3D and featuring IR pass-through this is a great problem solver and it's compact size makes it very unobtrusive.

Features:
- Uncompressed 1080p HDMI over Cat5e/6/7
- Local HDMI output on Sender unit
- Full range IR Pass-Thru (receiver & emitter included)
- CEC Pass-thru allows one remote control to sync TV and AV devices
- Support HDMI v.14 3D video format Blu-Ray player and 3D TV
- Support v1.4 HDMI Ethernet Channel

Specifications:
- HDMI Spec.:v1.4 Compliant
- DVI Spec.:v1.0 Compliant
- HDCP Spec.:v1.2 Compliant
- Video Format:Up to 1080p 3D Uncompressed Video
- Audio Format:Up to 7.1 Channel, DTS HD Master Audio/ Dolby TrueHD
- HDMI Source Input Port:1 Port
- HDMI Display Output Port:1 Port
- LINK Connector:RJ-45 Shielded x2
- HDMI Ethernet Channel:Pass-Thru Supported
- Power Consumption:3W
- Video Bandwidth:225MHz
- Single Link Range:480i, 480p, 576i, 576p, 720p, 1080i, 1080p
- Cat5e Cable Length:50M in 1080p
- Power Adapter:5V

Code PE121L   **£154.99**

Email your order to us at **sales@keene.co.uk**

PUMA 1106 HDMI over CAT5E/5 Extender

The CYP Puma HDMI over CAT6 Extender Set with IR Pass-through is the perfect solution to extend HDMI signals via CAT cabling up to 40m. The PU-1106 also allows you to use your existing Remote Control to control your device with the included IR Receiver & Blaster.

Code PU1106 **£205.04**

Features:
- v1.3 HDMI, HDCP 1.1 and DVI 1.1 compliant.
- HDMI over CAT6 Extender Set.
- Resolutions supported: PC - VGA to WXGA; HDTV - 480i to 1080p plus 1080p24fps.
- High Definition Audio supported: Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio plus LPCM.
- Compatible with CAT-5E and CAT-6 cables. CAT-6 is recommended for better performance.
- Supports CEC functions & IR blaster.
- Supports 'Deep Colour' (10, & 12 bit) - Transmission distances may be reduced at higher colour depths.
- Equalises and recovers incoming TMDS data before re-transmitting to ensure optimum signal quality.
- Supports xvYCC.

HDMI over CAT5E/5 Multiroom Distribution System

This is a great value HDMI over Cat cable distribution system that allows you to mix and match between stand-alone and wall-plate receivers. All types support 3D and provide IR feedback!

The sender unit takes a single HDMI input and transmits it via twin runs of CAT cable to up to four outputs up to a distance of 30.0m without signal loss.

This unit receives HDMI signals sent from the transmitter unit

This unit is the wall-plate version which receives HDMI signals sent from the transmitter unit

Features:
- Easy connection and installation
- Supports 24/36bit deep colour video formats
- Supports LPCM/LPCM7.1/DSD/DVD audio Dolby®-AC3/DTS5.1/DTS-HD/DTS master audio/Dolby® Digital Plus and Dolby® True-HD audio formats
- Can be used with stand alone or wall plate HDMI receivers
- Requires two Cat5e/6 STP/FTP cables per receiver (not supplied)
- Power required for the transmitter unit only

Specifications:
- HDMI version: High speed with 3D support
- HDCP version: 1.2
- Resolution: 1080P/1080i/720P/576P/576i/480P/480i
- Data transfer rate: Max 6.75Gbps
- Dimensions of transmitter: 111 x 75 x 23.5mm
- Weight of transmitter: 1190g
- Weight of power supply: 165g
- Power supply: 9Vdc 4A
- Dimensions of stand alone receiver: 82.4 x 69.5 x 22mm
- IR emitter and receiver lead length: 1.5m
- Dimensions: 33 x 14 x 19mm
- Weight: 25

You can buy them as individual components:

Code		
Code H4T	4 output transmitter	**£229.00**
Code H4SR	Stand alone receiver	**£46.00**
Code H4WR	Wall plate receiver	**£46.00**
Code H4IRR	IR receiver unit	**£8.99**
Code H4IRE	IR emitter	**£8.99**

Or as complete kits including the IR receivers and emitters:

Code		
Code H4KIT1	with 1 x transmitter, 2 x stand alone receivers, 2 x IR receivers and 1 x IR emitter	**£315.00**
Code H4KIT2	with 1 x transmitter, 4 x stand alone receivers, 4 x IR receivers and 1 x IR emitter	**£399.00**
Code H4KIT3	with 1 x transmitter, 2 x wall plate receivers, 2 x IR receivers and 1 x IR emitter	**£315.00**
Code H4KIT4	with 1 x transmitter, 4 x wall plate receivers, 4 x IR receivers and 1 x IR emitter	**£399.00**

H4KIT2

HWPK

H4KIT4

You can also use two wall plates as a single room-to-room option:

Code HWPK   4 output transmitter   **£79.99**

HDMI Over Distance Quick Reference Tool

Manufacturer	Code	Max Distance at 1080P	Single Run of CAT5E/6	Two Runs of CAT5E/6	Coax Cable RG59	IP Network	Wireless
AAVARA	PB5000P	100m	–	–	–	✓	–
AAVARA	PB5000POE	100m	–	–	–	✓	–
AAVARA	PCE122IR	120m	–	–	✓	–	–
AAVARA	PD3000	100m	✓	–	–	–	–
AAVARA	PE121A	50m	–	✓	–	–	–
AAVARA	PE121L	50m	–	✓	–	–	–
AAVARA	PE221	45m	–	✓	–	–	–
AAVARA	PE3D4K100	100m	✓	–	–	–	–
AAVARA	PE3D4K100A	100m	✓	–	–	–	–
CYP	HDMIFOKIT	300m	–	–	–	–	–
CYP	PU106	45m	–	✓	–	–	–
CYP	PU107	45m	✓	–	–	–	–
CYP	PU1106	40m	–	✓	–	–	–
CYP	PU1107	45m	✓	–	–	–	–
CYP	PU1109	100m	✓	–	–	–	–
CYP	PU506	100m	✓	–	–	–	–
CYP	PU507	100m	✓	–	–	–	–
CYP	PU514L	60m	✓	–	–	–	–
MARMITEK	GV811	25m	–	–	–	–	✓
MARMITEK	GV821	25m	–	–	–	–	✓
MARMITEK	MEG60	30m	–	✓	–	–	–
MARMITEK	MEG61	60m	–	✓	–	–	–
MARMITEK	MEG80	100m	✓	–	–	–	–
TV ONE	1TCT650	100m	✓	–	–	–	–
UNBRANDED	H4KIT1	30m	–	✓	–	–	–
UNBRANDED	H4KIT2	30m	–	✓	–	–	–
UNBRANDED	H4KIT3	30m	–	✓	–	–	–
UNBRANDED	H4KIT4	30m	–	✓	–	–	–
UNBRANDED	HDEX344	50m	✓	–	–	–	–
UNBRANDED	HDMIC530	30m	–	✓	–	–	–
UNBRANDED	HDMIC550	50m	–	✓	–	–	–
UNBRANDED	HDMIC550IR	60m	–	✓	–	–	–
UNBRANDED	HWPK	30m	–	✓	–	–	–

IR Feedback	RS232	Power Supply Required	Local HDMI Pass-through	No. of HDMI Inputs	No. of HDMI Outputs	Notes
✓	✓	both ends	–	1	1	IP network based
✓	✓	sender only	–	1	1	IP network based
✓	–	both ends	–	1	1	one to many daisy chain
–	–	both ends	–	1	1	one to many daisy chain
✓		receiver only	–	1	1	
✓		both ends	✓	1	1	
–		both ends	–	2	1	
✓		both ends	–	1	1	HDBASET
✓	✓	sender only	–	1	1	HDBASET & 3 port LAN on receiver
–	–	both ends	–	1	1	Fibre Optic
✓		both ends	–	1	1	
–		both ends	–	1	1	
✓	–	both ends	–	1	1	can be extended with extra hardware
–		both ends	–	1	1	can be extended with extra hardware
✓	✓	sender only	–	1	1	HDBASET & 3 port LAN on receiver
✓		both ends	–	1	1	HDBASET
✓	✓	sender only	–	1	1	HDBASET
✓		both ends	–	1	1	HDBASET
–	–	both ends	–	1	1	25m line of sight 12m non-line of sight
✓	–	both ends	✓	1	1	25m line of sight 12m non-line of sight
–		both ends	–	1	1	
✓		receiver only	–	1	1	
–		sender only	–	1	1	
✓		both ends	–	1	1	HDBASET
✓		sender only	–	1	2	2 separate receivers for multi-room. Up to 4 can be added.
✓		sender only	–	1	4	4 separate receivers for multi-room.
✓		sender only	–	1	2	2 separate wall receivers for multi-room. Up to 4 can be added.
✓		sender only	–	1	4	4 separate wall receivers for multi-room.
–		both ends	–	1	1	
–		receiver only	–	1	1	
–		receiver only	–	1	1	
✓		receiver only	–	1	1	
✓	–	neither!	–	1	1	wall plate to wall plate

More details on all products can be found online at...

HDMI to SDI Convertor

Mini Converter HDMI to SDI is ideal for converting from HDMI devices to SDI video with the choice to embed SDI audio from HDMI, AES/EBU or balanced analogue audio inputs. Now you can add SDI outputs to cameras with HDMI connections, or add if your computer supports HDMI compatibility via DVI to HDMI adapters, then you can use for adding SDI outputs to computers.

Specifications:
• HDMI to SDI Analogue Conversion
• Auto Switching SD and HD
• New 3 Gb/s SDI Technology
• Built in AES/EBU or Analogue Audio

Also available, an SDI to HDMI Convertor
Code CONVMSH **£231.11**

Code CONVMHS **£231.11**

HDMI Adaptors & Wall Plates

HDMI Outlet Plates

From Keene, a wall plate with an HDMI socket at the front and a PCB mounted rear socket. The rear socket is aligned such that a side entry HDMI cable should pass through one of the side knock-outs in a std metal rear pattresses. Depending on the size of plug used some modification to the pattress may be necessary.

We can supply this item as follows:

Code HCP26	single, white	**£19.99**
Code HCP26D	double, white	**£29.99**
Code HCP26S	single, steel	**£39.99**
Code HCP26SD	double, steel	**£54.99**

Single gang flat brushed steel
Code HCP26FS **£39.99**

A wall outlet plate with a HDMI socket at the front and an angled HDMI socket at the rear. A deep (47mm) back box is recommended. Depending on the size of the plug on the HDMi cable used, some modification to the pattress may be necessary.
Code HCP26G **£19.99**

A wall plate with a HDMI socket at the front and a HDMI socket at the rear, connected via a short (10cm) flexible cable. Ideal for situations where the rear HDMI cable is drawn through from unusual angles. Depending on the size of plug used some modification to the pattress may be necessary.

Code HCP26FC single, white **£29.99**

DVI Plug to HDMI socket Adaptor
Code KA170 **£9.99**

HDMI adaptor type C mini socket to type A plug
Code KA189 **£6.99**

HDMI adaptor type A socket to type C mini plug
Code KA190 **£7.99**

Mini Display Port to HDMI adaptor cable 15cm
Display port male to female HDMI
Code MDPHDMI **£19.99**

Back to back coupler for joining HDMI cables.
HDMI socket to socket coupler
Code KA173 **£6.99**

HDMI hinged 90 degree coupler
Code KA173H **£14.99**

Professional HDMI socket coupler in Black D shaped XLR cutout, ideal for use in patch panels as well as wall and floor plates. (Silver finish)
Code KLC123 **£9.99**

HDMI plug to HDMI socket right angled adaptor
Code KA191	(270 degree rotation)	**£7.99**
Code KA191L	(90 degree rotation)	**£7.99**
Code KA191F	(90 degree flat)	**£6.99**
Code KA213	(270 degree flat)	**£6.99**